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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,278	05/08/2001	Thomas M. Rothwein	M-11555 US	3426

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CSA LLP
4807 SPICEWOOD SPRINGS RD.
BLDG. 4, SUITE 201
AUSTIN, TX 78759

EXAMINER

PHAM, KHANH B

ART UNIT	PAPER NUMBER
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2166

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/851,278	ROTHWEIN ET AL.	
	Examiner	Art Unit	
	Khanh B. Pham	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29,33-35,38-41,44-47 and 50-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29,33-35,38-41,44-47 and 50-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-29, 33-35, 38-41, 44-47, 50-53 are rejected under 35 U.S.C. 102(b)** as being anticipated by Gottlob et al. ("Extending Object-Oriented Systems with Roles"), hereinafter referred to as "**Gottlob**".

As per claim 1, Gottlob teaches a method of arranging a plurality of objects, said method comprising:

- "setting a class hierarchy, wherein the class hierarchy comprises an upper level class and a lower level class" at page 273, Fig. 1;
- "assigning a first attribute to the upper level class, wherein the first attribute describes each object of the plurality of objects" at page 274, Figs. 2-3;
- "inheriting of the first attribute by the lower level class, wherein the first attribute is within a first domain with regard to the upper level class, the first attribute is within a second domain with regard to the lower level class, a second domain value set of the second domain is smaller than a first domain value set of the first domain" at page 270, 1st full paragraph and Figs. 2-3;

- “the first attribute is restricted to the second domain value set upon the inheriting” at page 270, 1st full paragraph and Figs. 2-3;
- “assigning a second attribute to the lower level class, wherein the second attribute describes each object of the plurality of objects associated with the lower level class” at page 274, Figs. 2-3
- “associating an object of the plurality of objects with a chosen class, wherein the chosen class is one of the upper level class and the lower level class” at Fig. 2;
- “the chosen class is chosen such that, for the object, every attribute assigned to the chosen class has a non-null value used to described the object” at page 273, 2nd paragraph and Figs. 2-3;
- “said method is performed by a processor configured to perform said method” at page 268, abstract.

As per claim 2, Gottlob teaches the method of claim 1, further comprising:

“superseding said first attribute of said upper level class by assigning a third attribute to the lower level class, wherein the third attribute describing an object that is a member of the lower level class” at Figs. 1-3.

As per claim 3, Gottlob teaches the method of claim 1, wherein “the first attribute comprises a distinctive domain value set” at Figs. 1-3.

As per claim 4, Gottlob teaches the method of claim 1, wherein “the class hierarchy further comprises a third class below the lower level class in the class

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hierarchy, and further comprising: inheriting of the attribute by the class" at page 273 and Figs. 1-3.

As per claim 5, Gottlob teaches the method of claim 1, further comprising: "expanding the class hierarchy horizontally by adding a fourth class to the lower level class; and inheriting of the first attribute by the class" at Fig. 1.

Claims 6-29,33-35,38-41,44-47,50-53 recite similar limitations as in claims 1-5 and therefore rejected by the same reasons.

Response to Arguments

3. Applicant's arguments filed December 21, 2007 have been fully considered but they are not persuasive. The examiner respectfully traverses applicant's arguments.

Regarding independent claims 1, 6, 11, 16 and 21, applicants argued that Gottlob does not teach the claimed "domain". On the contrary, Gottlob clearly teaches the claimed domain, by way of specific example shown in Fig. 1, which can be mapped to claimed limitation as follows:

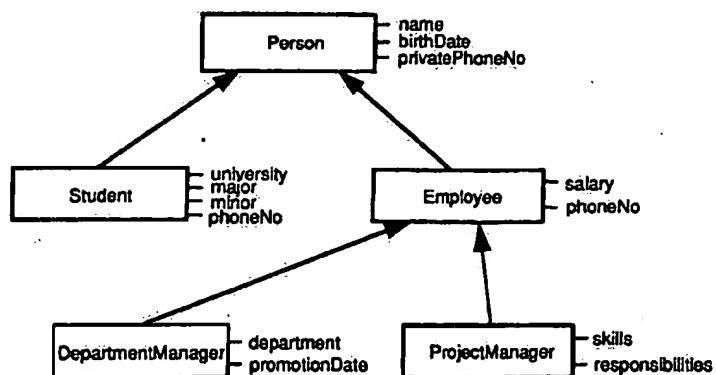


Fig. 1. A class hierarchy.

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- *“the first attribute is within a first domain with regard to the upper level class”* :
Person is assigned to upper level class, the domain of “person” is all people on earth.
- *“the first attribute is within a second domain with regard to the lower level class”*:
Student and employee are assigned to lower level classes. Domain of “Student” is all Students and domain of Employee is all employees on earth.
- *“a second domain value set of the second domain is smaller than a first domain value set of the first domain”*: The set of all students on earth (i.e., second domain) is always smaller than the set of all people on earth (i.e., “a first domain value set of the first domain”), because only a subset of people on earth are students.
- *“associating an object of the plurality of object with a chosen class, wherein the chosen class is chosen such that, for the object, every attribute assigned to the chosen class has a non-null value used to described the object”*: If a person is also a student and is not an employee, he/she should be associated with student class instead of Employee. In response to applicant’s argument that “a person qualifying for the “Student” class may have an undeclared major, and thus those instance variables would be null for an entry for that person, the examiner respectfully submits that even if the student has “undeclared major”, the instance variable would not be NULL, but instead having the value of “Undeclared”.

In light of the foregoing arguments, the 35 U.S.C 102 rejection is hereby sustained.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Khanh B. Pham
Primary Examiner
Art Unit 2166



January 27, 2007